

Success with SLABS

*Bring out the beauty
in live-edge lumber.*

By Rob Spiece and Larissa Huff

As woodworkers, we're often in awe of our material. It's not unusual for us to marvel at the color and figure in wood, and even at the swirling patterns of grain that wind their way around knots and other defects. We here at Lohr Woodworking Studio work a lot with *live-edge* slabs precisely so that we can showcase wood's naturally occurring beauty and blemishes alike, giving "flaws" their share of the limelight.

Live-edge woodworking derives its name from the technique of stripping bark from slabs without altering the natural shape of the underlying edge. As an extension of this philosophy of honoring a tree's intrinsic beauty, live-edge pioneers like George Nakashima also incorporated splits, checks, and knots into their work. We continue that tradition today, letting the uninhibited slab of wood speak for itself, and allowing it to guide the design we create for the structure that supports it.

Due to the rising popularity of the craft, more slabs than ever are available, and live-edge furniture design options are endless. Here, we'll show you how to bring out the best in slabs as a way of entering the craft. Then, if you're willing to explore new possibilities and to teach your brain to see opportunity instead of defects, you'll enter the realm of truly one-of-a-kind projects.



Order of Work

- Surface and smooth the slab.
- Remove the bark and clean up the edge.
- Stabilize splits and patch defects.
- Fill voids if desired.



"Dutchman" patch

Live edge

Check



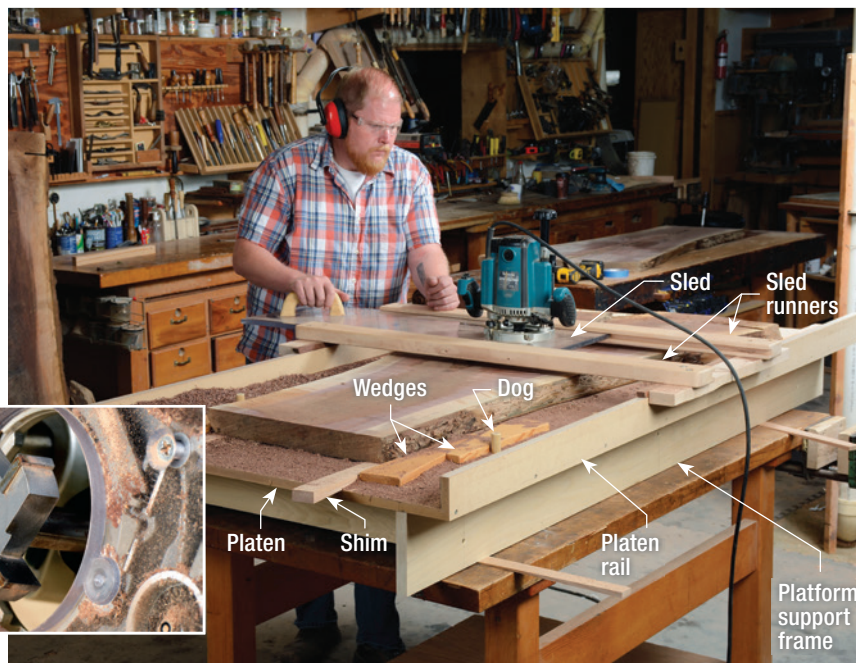
Finding the right slab

Many mills (and some Woodcraft stores) carry slabs. Also, try checking an online supplier. (See page 64 for sources.) We cut many of our own slabs with a portable chain saw mill, but realize that it's no small undertaking to slab your own lumber.

The thickness of a candidate slab is important, especially if the edge is to be the focus. For tabletops, look for something 1½" to 2½" thick. Thinner pieces are fine for shelving and small projects. As for shape, be aware that designing a base for a wildly dramatic slab can be challenging, as it usually doesn't pair well with typical leg-and-apron construction. Instead, consider spindle legs, steel bases, and trestle configurations, mocking them up first using cardboard and scrap wood.

Inquire if a slab has been kiln-dried. Many are simply air-dried because they don't fit well into small kilns. Look for a milling date as a drying-stage reference. As a general rule, any hardwood should air-dry at least one year for each inch of thickness, but use a moisture meter for an accurate assessment.

Slab-happy. Part of the fun of working with slabs is that each one—even if part of a flitch—is distinct, and inspires its own particular treatment.



Flattening: A good job for a jig

Flattening a large slab presents an unusual challenge, even for woodworkers who have a large planer or thickness sander, because one face of a slab still needs to be flattened before feeding it through one of these machines. You can hand-plane a slab, or try using a portable belt sander, but both approaches are very labor-intensive, and you can't be too fussy about the results. Many shops, like ours, flatten slabs using a router sled. (See page 48.)

Build a big jig. A router outfitted with a wide-diameter bit (see inset) and mounted on a runner-guided sled assembly provides a great way to flatten a slab. The slab is shimmed and wedged in place. The router runs across the slab in a sled assembly that also slides along rails to facilitate a series of overlapping passes. See p. 48 for details on building and using this slab-flattening jig.

Peel and preen the live edge to highlight its beauty

Debarking the slab is important not only to expose the edge and evict any live or dead bugs, but to remove residual bark that might otherwise eventually fall away, soiling someone's carpet. The type and tenacity of the bark determines the tool used to remove it, whether it be a drawknife, screwdriver, or gouge. After debarking the edge, remove any residual detritus or fibers using a wire wheel. Then finish up the edge using sandpaper to soften any sharp or rough spots and to ease the edge where it meets the slab surfaces.



Aim for a close shave. For relatively smooth edges, start with a drawknife. The goal here is to remove what comes away easily without cutting away solid wood. Try to leave the paper-thin layer of dark color that covers the sapwood, while smoothing out the surface enough to make it nice to the touch. You'll follow up with a wire wheel and sandpaper later.



Pry with a driver. For burred edges or large bulges, try a mallet and standard screwdriver. The blunt tip won't mar the slab edge if you're careful. Work the driver into a fissure, and use a combination of tapping and prying to release the bark.



Coax tough stuff with a gouge. When dealing with tenacious bark, use a small carving gouge to lever off or cut away smaller sections at a time.



Scrub with a wire wheel. A debarked edge may retain bits of bark as well as loose fibers. (We call 'em "furries," [see inset]). These are best eroded with a wire wheel in a drill driven in reverse to keep the chuck from loosening its grip.





Tape and trace. Use double-faced tape to attach the key at its inlay location, labeling the piece and the slab surface for reorientation later. Then carefully trace around the key with a marking knife.



Route it out. Outfit a plunge router with a $\frac{5}{16}$ "-diameter upcut spiral bit, and rout out the bulk of the waste to a final depth $\frac{1}{8}$ to $\frac{1}{4}$ " less than your key's thickness. Rout in a clockwise direction, making a succession of shallow ($\frac{3}{8}$ " or less) passes. Stay $\frac{1}{16}$ " away from your knife lines until you reach final depth. Then nibble back to your knife line just until you see the fibers break away from it. For a butterfly, you can use a chisel and mallet to pare back to the knife lines.

Keep splits in check with decorative reinforcements

End-checks and other splits are common characteristics in slab furniture, and shouldn't necessarily be cut away as "defects." All the same, they do need to be reinforced to prevent further movement. The traditional approach is to span a check by inlaying a "key," often shaped like a butterfly. Here at Lohr Woodworking Studio, we use bone-shaped keys instead for a custom touch. Whatever shape you choose, orient the grain lengthwise, and make the piece wider at its ends than at the center for mechanical strength. Bandsaw the key from stock that's about $\frac{2}{3}$ the thickness of the slab, and use a sanding drum to smooth the edge of a bone, or a chisel to clean up the edges of a butterfly. Then install the key as shown.



Tap it home. After lightly chamfering the underside of the key for easier insertion, brush epoxy on the wings of the recess and key. Then tap it in until it bottoms out. Afterward, plane or sand the key flush with the slab surface.

Dealing with defects: Fix with Dutchmen or epoxy

Learning to love flaws doesn't mean you shouldn't be discerning about those that clearly cross the line into defect territory. For example, you'll want to patch sections where growth layers are peeling up (often induced by windshake in the living tree). Loose or broken knots should usually be "replaced" with a patch or filled with epoxy. As for voids, either leave them be or fill them with epoxy.

Installing a patch, or *Dutchman*, is identical to installing a key, except that the patch typically doesn't need to be very deep. The key to success is selecting Dutchman material that matches the grain patterns and color of the area surrounding the defect. Instead of square patches, we typically create curved, organic shapes that better mimic grain flow. When replacing a knot, favor a patch that matches the tone and color of the original. When using epoxy, follow the procedures shown here. (Note that 5-minute epoxy can be used for small voids and keys, but you'll want to use a slow-set variety for larger voids.)

Finish up with oil and varnish

We've found that the best approach to beautifying and protecting slabs is to first slather the entire piece with boiled linseed oil to "pop" the color and figure. After wiping off the excess, let the oil dry for 5 days before applying the first of about 5 coats of a satin-sheen wiping varnish to both sides. (Avoid a gloss sheen because it's too difficult to rub out edges afterward to subdue the shine.) Where necessary, use an artist's brush to get the finish into unfilled checks and other splits. Scuff-sand the flat surfaces between coats, and rub out the final coat using steel wool lubricated with mineral spirits to eliminate dust nibs and create a consistent luster.

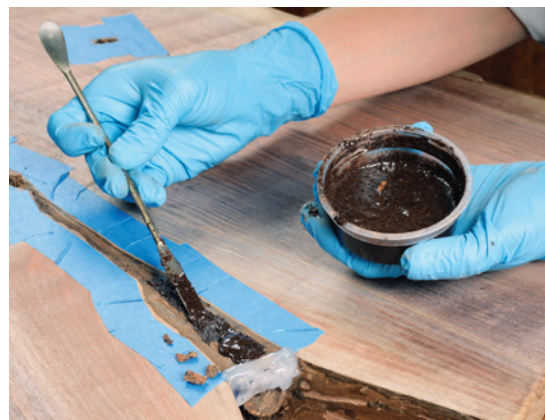


Dam it. In preparation for filling an open-ended void with epoxy, use hot-melt glue to create a dam. Use masking tape to protect the wood pores in the surrounding area from epoxy contamination, which will resist finish.

Gather your ingredients. For an inconspicuous patch, you need to add wood to your epoxy: bark crumbles, bits of broken knots, and sanding dust that's darker than the slab wood. Blend wood fillers with water first to test your color, then adjust as necessary. It's OK to add dust from different woods. Record your recipe in case you need to mix more later.



Fill the pool. Set aside appropriately sized "crumble" filler, and make up your epoxy mix, adding enough dust to color the epoxy completely with no translucency. Then firmly press the schmutz into the void. (Note that small knots and voids don't typically require crumble filler.)



Dunk the crumbles. Press bark crumbles into the wet epoxy mix. After sanding, this treatment will mimic the color and texture of a natural bark inclusion instead of just looking like epoxy filler.

